

CLAIMS FILED IN '759 APPLICATION

Claims

What is claimed is:

1. A PCR primer useful in detecting *Bacillus anthracis*, comprising the sequence:
5' GTT ATG GTA CAG AGT TTG CG 3' (SEQ ID NO. 94)
2. A PCR primer useful in detecting *Bacillus anthracis*, comprising the sequence:
5' TTG TTT TGC AGC TGA TTG T 3' (SEQ ID NO. 95).
3. A method for specifically detecting a DNA sequence from *Bacillus anthracis* comprising the steps of:
 - (a) providing a DNA sample;
 - (b) incubating the DNA sample with primers comprising the sequences:
5' GTT ATG GTA CAG AGT TTG CG 3' (SEQ ID NO. 94) and
5' TTG TTT TGC AGC TGA TTG T 3' (SEQ ID NO. 95);
 - (c) amplifying DNA hybridizing to said primers; and
 - (d) detecting the presence of any amplified product,whereby only DNA from *Bacillus anthracis* is amplified and detected.
4. The method of claim 3 wherein said detecting is done with a probe comprising a sequence selected from the group consisting of:
5' TAGCATT 3' (SEQ ID NO: 107) and 5' AATGCTA 3' (SEQ ID NO.108).
5. The method of claim 4 wherein said probes are selected from the group consisting of:
5' TAGCATTCAAAGCACAAATG 3' (SEQ ID NO. 109) and
5' CATTTGTGCTTTGAATGCTA 3' (SEQ ID NO. 101).
6. A PCR primer useful in detecting *Bacillus globigii*, comprising the sequence:

5' ACA TGG CTA ACT CAA ACA ACA A 3' (SEQ ID NO. 103).

7. A PCR primer useful in detecting *Bacillus globigii*, comprising the sequence:

5' GGT TTT GTT TTC TTA CTT GTT GTA C 3' (SEQ ID NO 104).

8. A method for specifically detecting a DNA sequence from *Bacillus globigii*, comprising the steps of:

(a) providing a DNA sample;

(b) incubating the DNA sample with primers comprising the sequences:

5' ACA TGG CTA ACT CAA ACA ACA A 3' (SEQ ID NO. 103) and

5' GGT TTT GTT TTC TTA CTT GTT GTA C 3' (SEQ ID NO. 104);

(c) amplifying DNA hybridizing to said primers; and

(d) detecting the presence of any amplified product,

whereby only DNA from *Bacillus globigii* is amplified and detected.

9. A PCR primer useful in detecting *Clostridium perfringens*, comprising the sequence:

5' AAT AAC TAA GGA GGA ATG AAA AAT GT 3' (SEQ ID NO. 105).

10. A PCR primer useful in detecting *Clostridium perfringens*, comprising the sequence:

5' TTG TTC TAC CAT TCT TTT AAC CAT T 3' (SEQ ID NO. 106).

11. A method for specifically detecting a DNA sequence from *Clostridium perfringens*, comprising the steps of:

(a) providing a DNA sample;

(b) incubating the DNA sample with primers comprising the sequences:

5' AAT AAC TAA GGA GGA ATG AAA AAT GT 3' (SEQ ID NO.105) and

5' TTG TTC TAC CAT TCT TTT AAC CAT T 3' (SEQ ID NO. 106);

(c) amplifying DNA hybridizing to said primers; and

(d) detecting the presence of any amplified product,

whereby only DNA from *Clostridium perfringens* is amplified and detected.

12. A cloned and isolated nucleic acid encoding a *Bacillus globigii* sasp-gamma polypeptide comprising the sequence recited in SEQ ID NO 110.

13. A primer which hybridizes specifically to the sequence recited in Claim 12.

14. A method for the detection of *Bacillus globigii* in a sample, comprising the steps of:

(a) incubating the sample with amplification primers that hybridize to the *Bacillus globigii* sasp-gamma gene;

(b) amplifying hybridized primers; and

(c) detecting the presence of amplified *Bacillus globigii* sasp-gamma gene sequences.